

REMARKS

Claims 1-15 are pending in this application. Claims 1 and 9 are independent claims. Claims 1, 3, and 9 are amended. Reconsideration and allowance of the present application are respectfully requested.

The specification basis for amending claims 1 and 9 may be found in at least paragraphs [0028] and [0040] of Applicant's filed application. Specifically, paragraph [0028] states that the "detection metric" may be estimated, using Equations 6 and 7 as listed in paragraph [0040].

Applicant respectfully notes that Box 10 of the Office Action Summary¹ is checked, but no indication of whether the drawings are accepted or rejected by the Examiner is made. Applicant respectfully requests that the Examiner's next communication include an indication as to the acceptability of the filed drawings or as to any perceived deficiencies so that the Applicant may have a full and fair opportunity to submit appropriate amendments and/or corrections to the drawings.

Specification

The disclosure has been amended to clarify that Equations (6) and (7) are the "detection metric", as recited in Applicant's claims.

¹ See February 7, 2008 Office Action Summary.

Rejections under 35 U.S.C. §112

Claim 3 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. This rejection is respectfully traversed.

The Examiner rejects use of the term “without substantial link level processing”, as the Examiner asserts that this term is vague and indefinite because the metes and bounds of the claimed invention are not known. Applicant amends claim 3 to instead recite “without link-level processing requiring repeated system simulations of the communication system”. Applicant asserts that this new term is neither vague nor indefinite, such that it defines the metes and the bounds of the claimed invention. Therefore, Applicant respectfully requests that the rejection of claim 3 under 35 U.S.C. §112 be withdrawn.

Rejections under 35 U.S.C. §102 - Iochi

Claims 1-5 and 8 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Publication No. 2003/0058972 (“Iochi”). This rejection is respectfully traversed.

With regard to independent claim 1, the Examiner asserts that Iochi teaches all of the claim limitations. Specifically, the Examiner asserts that paragraph [0011] of Iochi teaches a probability of preamble detection that discloses the “determining a detection metric” limitation of claim 1. Applicant asserts that Iochi does not teach “determining a detection metric for one or

more given wireless channel coefficients representing a plurality of wireless channel realizations, the determining of the detection metric being accomplished without the use of an actual hardware reception apparatus", as recited in claim

1. Applicant draws the Examiner's attention to paragraph [0011] of Iochi which discloses using a "preamble reception apparatus" capable of maintaining the probability of preamble detection and the probability of erroneous detection. Additionally, Applicant draws the Examiner's attention to paragraph [0013] of Iochi which explains that an object of Iochi is to receive a communication start request signal (preamble) that is generated and sent by a "communication terminal apparatus". Furthermore FIG. 2 of Iochi, described in at least paragraph [0027], discloses a block diagram showing the configuration of Iochi's preamble reception apparatus. Applicant asserts that each of these portions of require an actual hardware reception apparatus as an integral and necessary component of the Iochi application. Applicant asserts that because Iochi requires a reception apparatus, Iochi therefore does not teach "determining a detection metric for one or more given wireless channel coefficients representing a plurality of wireless channel realizations, the determining of the detection metric being accomplished without the use of an actual hardware reception apparatus", as recited in claim 1.

For at least the reasons stated above related to independent claim 1, Applicant believes this claim to be patentable. For at least the same reasons related to dependent claims 2-5 and 8, Applicant also believes these claims to

be patentable. Therefore, Applicant respectfully requests that this rejection of claims 1-5 and 8 under 35 U.S.C. §102 be withdrawn.

Rejections Under 35 U.S.C. § 103 - Herrmann

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 7,161,952 ("Herrmann"). This rejection is respectfully traversed.

The Examiner uses Herrmann to teach the use of a random number such that if the random number exceeds the persistency probability, the terminal cannot send the preamble.² With regard to independent claim 1, Applicant asserts that Iochi does not teach the claim, for at least the reasons stated above. Applicant asserts that a review of Herrmann does not remedy the deficiencies of Iochi. Therefore, Applicant asserts that neither Iochi nor Herrmann, either singly or in combination with each other, teach or suggest "determining a detection metric for one or more given wireless channel coefficients representing a plurality of wireless channel realizations, the determining of the detection metric being accomplished without the use of an actual hardware reception apparatus", as recited in claim 1.

For at least the reasons stated above related to independent claim 1, Applicant believes that dependent claim 6 is patentable. Therefore, Applicant respectfully requests that this rejection of claim 6 under 35 U.S.C. §103 be withdrawn.

² See Page 6 of the February 7, 2008 Office Action.

Rejections Under 35 U.S.C. § 103 – Iochi in view of Hamada

Claims 7, 9-10 and 13-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Iochi in view of U.S. Patent No. 6,873,607 (“Hamada”). This rejection is respectfully traversed.

With regard to dependent claim 7, the Examiner uses Hamada to teach the use of calculating an average value of the interference detection rates of the timeslots assigned to all R channels every frame.³ Applicant asserts that Iochi does not teach all of the claim limitations of independent claim 1, of which dependent claim 7 depends, for at least for the reasons stated above. Applicant asserts that a cursory review of Hamada indicates that Hamada does not remedy the deficiencies of Iochi. Therefore, Applicant asserts that neither Iochi nor Hamada, either singly or in combination with each other, teach or suggest “determining a detection metric for one or more given wireless channel coefficients representing a plurality of wireless channel realizations, the determining of the detection metric being accomplished without the use of an actual hardware reception apparatus”, as recited in claim 1.

With regard to independent claim 9, the Examiner asserts that Iochi teaches all of the claim limitations with the exception that Iochi does not teach “as an average detection probability over the plurality of wireless channel realizations”.⁴ The Examiner asserts that Hamada teaches this missing

³ See Page 7 of the February 7, 2008 Office Action.

⁴ See Page 8 of the February 7, 2008 Office Action.

limitation, as the Examiner cites column 7, lines 22-39 of Hamada in making this assertion. Applicant asserts that independent claim 9 contains features similar to independent claim 1, such that at least the same arguments can be made. Specifically, Applicant asserts that Iochi does not teach “determining, for each given RACH preamble of a plurality of wireless channel realizations, a conditional detection probability, the conditional detection probability determined without link-level processing requiring repeated system simulations of the communication system and without requiring system simulations using an actual hardware reception apparatus”, as recited in claim 9. Applicant asserts that a review of Hamada does not remedy the deficiencies of Iochi, as neither reference, either singly or in combination with each other, teaches or suggests this limitation of claim 9.

For at least the reasons stated above related to independent claim 1 and 9, Applicant believes these claims to be patentable. For at least the same reasons related to dependent claims 7, 10 and 13-15, Applicant also believes these claims to be patentable. Therefore, Applicant respectfully requests that this rejection of claims 7, 9-10 and 13-15 under 35 U.S.C. §103 be withdrawn.

Rejections Under 35 U.S.C. § 103 –

Iochi in view of Hamada and further in view of Herrmann

Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Iochi in view of Hamada as applied to claims 9 and 10, and further in view of Herrmann. This rejection is respectfully traversed.

With regard to independent claim 9, Applicant asserts that Iochi in view of Hamada does not make this claim obvious, for at least the reasons stated above. Applicant asserts that a review of Herrmann does not remedy the deficiencies of Iochi in view of Hamada, as none of these references, either singly or in combination with each other, teach or suggest “determining, for each given RACH preamble of a plurality of wireless channel realizations, a conditional detection probability, the conditional detection probability determined without link-level processing requiring repeated system simulations of the communication system and without requiring system simulations using an actual hardware reception apparatus”, as recited in claim 9.

For at least the reasons stated above related to independent claim 9, Applicant believes that dependent claim 11 is patentable. Therefore, Applicant respectfully requests that this rejection of claim 11 under 35 U.S.C. §103 be withdrawn.

Allowable Subject Matter

Applicant notes with appreciation the Examiner's indication that claim 12 contains allowable subject matter. However, Applicant believes that independent claim 9 and dependent claims 10 and 11, of which dependent claim 12 depends, are also allowable for at least the reasons stated above.

CONCLUSION

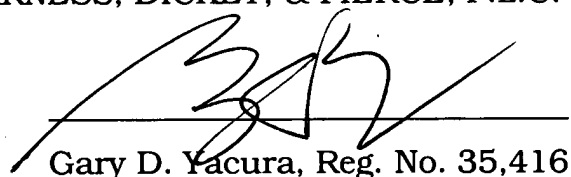
In view of the above remarks and amendments, Applicant respectfully submits that each of the rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Gary D. Yacura at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,
HARNESS, DICKEY, & PIERCE, P.L.C.

By


Gary D. Yacura, Reg. No. 35,416

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

GDY/CES/cm